

## REMARKS

Claims 1-2, 9-13 and 15 are pending in this application.

Claims 3-8, 14 and 16-17 were previously cancelled.

Claims 1-2, 9, 10 and 15 are rejected.

Claims 1 and 9-10 are currently amended.

### **Objection to New Matter in Specification**

Applicants have amended at page 28 of the specification Example B to read “ethylene/acrylic acid/acrylate”. The Applicants have amended the specification using recognized art terminology as recommended by the Examiner in paper number 8. The Applicants submit that the new matter objection is overcome. No new matter has been added.

### **35 U.S.C. 112, first paragraph/New Matter**

Claim 1,2,9,10 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The Examiner has rejected the last amendment to claim 1 because the term “ester groups” is not enabled by the specification. Specifically, the Examiner states there is no enablement for the compatibilizer polymer containing solely ester groups which react with the sterically hindered phenol. The Applicants disagree. The claim 1 amendment was taken verbatim from page 18, second to last paragraph. See “These compatibilizers are polymers containing acid groups, acid anhydride groups, ester groups, epoxy groups or alcohol groups.” The Applicants respectfully request that the Examiner reconsider, even though the Applicants inadvertently did not refer specifically to the correct page and paragraph in the previous Office Action response of 9/15/03.

### **35 USC 112, Second Paragraph**

Examiner states Claims 9, 1 and 10 are indefinite.

Claim 9 has been amended to claim polymers with acid, anhydride or alcohol functions which are present in copolymers of acrylic acid, glycidyl methacrylate, maleic anhydride or vinyl alcohol as suggested by the Examiner.

Claim 1 has been amended to delete “selected from the group consisting of the” and “obtainable” has replaced with “obtained”.

Claim 10 has been amended as suggested by the Examiner.

No new matter has been added.

The Applicants respectfully request reconsideration and withdrawal of the 35 U.S.C. 112, second paragraph rejections above.

### **35 U.S. C. 103(a)**

Claims 1,2,9,10 and 15 are rejected under 35 U.S.C. 103(a) as obvious over JP '054 in view of Examiner's Notice of Admissions by Applicant.

The Applicants thank the Examiner for including an English translation of JP '054.

The Examiner states it would have been obvious to one of ordinary skill in the art to use the stabilizers taught by JP '054 in polyethylene/nylon-6 blends with an expectation of improved performance over lower molecular weight stabilizers in terms of permanence, especially since JP '054 teaches their use in the individual components of such a blend. The Applicants disagree.

JP '054 claims a method for producing stabilizers. JP '054 makes 3 derivative of a glycidylated hindered phenolic by reacting with methacrylic acid/styrene, acrylic acid/ethylene copolymer, and acrylic acid/methyl methacrylate copolymer. All application data within JP '054 is directed to

within the polypropylene alone. No suggestion is made to use the polymeric stabilizer in blends which present special stabilization problems.

The Applicants have claimed a process for stabilizing and at the same time phase compatibilizing plastic compositions comprising at least two different polymers. Stabilizing plastic blends presents special problems depending on the polarity of the components. A nonuniform distribution of the stabilizer compounds is obtained in the polyphase polymer system. "The distribution equilibrium of the stabilizers is additionally influenced by the compatibilizers used which are moreover often the least stable component of the composition. Thermal or photooxidative damage of the compatibilizer then results in a very rapid breakdown of the entire composition because the compatibilizing component is impaired." See page 2, paragraph 1. Thus it is important in blends that the compatibilizer be suitable for the particular blend since both the stabilization and compatibilization functions affect each other. The Applicants have elected a stabilizer/compatibilizer made by reacting the glycidyl ester of phenolic acid with ethylene/acrylic acid/acrylate (Lucalen® A 3110 MS). The particular terpolymer is designed specifically for compatibilizing. The data generated in Table I of the instant invention clearly show the relationship between the compatibilizing functionality and the stabilizing functionality with retained impact resistance over quite long periods of time even after extraction. See Ex. 9 of Table 3. There is no evidence in JP '054, that this difficulty was recognized, nor is there evidence in JP '54 that the copolymers selected would work to actually compatibilize blends such as Polyamide/LDPE.

Furthermore, the JP '054 polymeric stabilizer has a ratio of polymer and functionalized stabilizer of 2:1 respectively giving a polymeric stabilizer which is mainly stabilizer. Almost 50% of the weight of polymeric stabilizer of JP '054 is antioxidant. See JP '054 application example 2. The stabilizer functionality on the Applicants stabilizer/compatibilizer by contrast makes up only about 2% by weight of antioxidant functionality. See Example B on page 28. Clearly the stabilizer of JP '054 and the instant invention are different. The degree of antioxidant functionality present in the polymeric stabilizers of JP '054 shows the polymeric stabilizer is designed for stabilization only. The polymeric stabilizer/compatibilizer of the present invention is specifically designed for stabilization and compatibilization exemplified by the ratio of compatibilizer and antioxidant and choice of the particular compatibilizer terpolymer chosen. The Applicants respectfully submit that the 103(a) rejection is overcome and request that the Examiner reconsider.

Since there are no other grounds of objection or rejection, passage of this application to issue with claims is earnestly solicited.

Applicants submit that the present application is in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the examiner contact the undersigned representative.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Tyler Stevenson', with a long horizontal flourish extending to the right.

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